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Attorney's Docket No.: 06129-156001

3728

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Kevin H. Gillespie  
Serial No. : 09/458,415  
Filed : December 10, 1999  
Title : SHOE OUTSOLE

Art Unit : 3728  
Examiner : Anthony D. Stashick

Commissioner for Patents  
Washington, D.C. 20231

PETITION TO WITHDRAW NOTICE OF ABANDONMENT

Under 37 CFR §§1.8(b) and 1.181, applicant hereby petitions to withdraw the Notice of Abandonment mailed February 11, 2002 (copy enclosed). The application was abandoned under 37 CFR §1.135 for failure to respond to the Office Action mailed June 6, 2001.

The undersigned, applicant's attorney of record, first became aware of the abandonment on February 14, 2002, upon receipt of the Notice of Abandonment and submits that this petition to withdraw the Notice is being promptly submitted as required by 37 CFR §1.8(b)(1).

The following documents are submitted under 37 CFR §1.8(b)(2) as proof that a Response was timely filed on December 6, 2001:

1. A copy of the response to the Office action, including an executed certificate of mailing signed by Timothy A. French on December 6, 2001;
2. A copy of the Petition for Extension of Time, including an executed certificate of mailing signed by Timothy A. French on December 6, 2001, which extended the period for responding to the Office Action for six months, to and including December 6, 2001; and
3. A copy of the check dated December 5, 2001 and postcard dated December 6, 2001 that were included with the response and Petition for Extension of Time.

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

FEBRUARY 20, 2002

Date of Deposit

Signature

TIMOTHY A. FRENCH

Typed or Printed Name of Person Signing Certificate

Best Available Copy

Applicant : Kevin H. Gilles  
Serial No. : 09/458,415  
Filed : December 10, 1999  
Page : 2

Attorney's Docket No.: 06129-156001

The undersigned, on the basis of personal knowledge, attests that the above documents were timely filed on December 6, 2001.

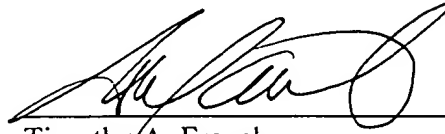
Applicant submits therefore that the response to the Office Action was timely filed and requests that the Notice of Abandonment be withdrawn.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

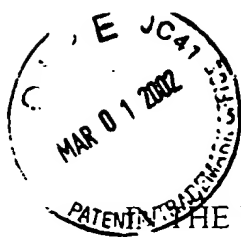
Date:

February 20, 2002



Timothy A. French  
Reg. No. 30,175

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COPY OF PAPERS  
ORIGINALLY FILED

Attorney's Docket No.: 06129-156001

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Kevin H. Gillespie  
Serial No. : 09/458,415  
Filed : December 10, 1999  
Title : SHOE OUTSOLE

Art Unit : 3728  
Examiner : A. Stashick

Commissioner for Patents  
Washington, D.C. 20231

RESPONSE

In response to the action mailed June 6, 2001, please amend the application as follows:

In the specification:

Please replace the paragraph beginning at page 5, line 3 with the following rewritten paragraph:

--Lower surface 22 includes a heel region 56 that defines additional grooves 38. Grooves 38 in heel region 56 extend completely to side edges 28, 30. Although six grooves 38 are shown in heel region 56, there may be more or less grooves 38, or no grooves 38.--

In the claims:

Please amend claims 1, 4, 6, 7, 47, 48, 60, 66, 74 and 76 as follows:

--1. (Amended) A shoe outsole for a baby shoe, comprising:  
an outer member including an inner heel region; and  
an inner member located in the inner heel region and including a ground contacting surface, the inner member having a softer durometer than the outer member;  
the shoe outsole being dimensioned for use in a baby shoe, and the inner member being positioned and dimensioned to fit under a baby's heel during use of the baby shoe.--

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

DECEMBER 6, 2001  
Date of Deposit

Signature

TIMOTHY A. FRENCH

Typed or Printed Name of Person Signing Certificate

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10:30 AM  
COMM-FRONT

--4. (Amended) The shoe outsole of claim 1 wherein the inner member extends to within about 2 mm of a back edge of the outer member.--

--6. (Amended) The shoe outsole of claim 5 wherein the intermediate member extends to within about 1.5 mm of a front edge of the outer member.--

--7. (Amended) The shoe outsole of claim 5 wherein the intermediate member extends to within about 2 mm of a back edge of the outer member.--

--47. (Amended) A shoe outsole for a baby shoe, comprising:  
an outer member;  
an inner member, located in an inner heel region of the shoe outsole; and  
an intermediate member located in an intermediate region of the shoe outsole, between the outer member and the inner member,  
the intermediate member having a softer durometer than the outer member, and including a plurality of ridges, and  
the inner member including a ground contacting surface, and having a softer durometer than the outer member;  
the shoe outsole being dimensioned for use in a baby shoe, and the inner member being positioned and dimensioned to fit under a baby's heel during use of the baby shoe.--

--48. (Amended) A shoe outsole for a baby shoe, comprising:  
an outer member including, a lower forefoot region, an opposite upper forefoot region, and a back wall, the back wall having a rounded contour extending smoothly between a horizontal plane and a vertical plane;  
an inner member located in an inner heel region of the shoe outsole, and including a ground contacting surface, the inner member having a softer durometer than the outer member;  
a plurality of substantially parallel grooves defined in the lower forefoot region, at least one of the plurality of grooves extending toward a front edge of the shoe outsole beyond a ground engaging portion of the lower forefoot region when flat footed;  
a plurality of substantially parallel ridges included in the lower forefoot region, at least some of the ridges being interdigitated with the grooves in the lower forefoot region; and  
a plurality of substantially parallel grooves defined in the upper forefoot region;

the shoe outsole being dimensioned for use in a baby shoe, and the inner member being positioned and dimensioned to fit under a baby's heel during use of the baby shoe.--

--60. (Amended) The shoe outsole of claim 49 wherein the outer member includes a back wall having a rounded contour extending smoothly between a horizontal plane and a vertical plane.--

--66. (Amended) The shoe outsole of claim 61 wherein the outer member includes a back wall having a rounded contour extending smoothly between a horizontal plane and a vertical plane.--

--74. (Amended) The shoe outsole of claim 67 wherein the outer member includes a back wall having a rounded contour extending smoothly between a horizontal plane and a vertical plane.--

--76. (Amended) The shoe outsole of claim 1 wherein the ground contacting surface further includes an intermediate member, between the inner member and the outer member, having a softer durometer than the outer member, the durometer of the inner member being softer than the durometer of the intermediate member.--

In the drawings:

Four sheets of amended informal drawings (Figs. 1-4) are submitted herewith for the Examiner's approval, with changes marked in red. A copy is being forwarded to the Official Draftsman under separate cover.

### REMARKS

Claims 1-8 and 47-76 are pending in this application. Claims 1, 4, 6, 7, 47, 48, 60, 66, 74 and 76 are amended herein. Claims 2-3, 5, 8, 49-59, 61-65, 67-73 and 75 remain unchanged. No claims have been added or cancelled.

#### *Requirement for New Oath/Declaration*

In response to the requirement by the Examiner for submission of a new oath or declaration to replace the original declaration that was found defective, we submit herewith a new declaration identifying the application by serial number and filing date and signed by the inventor with his post office address.

#### *Objections to the Specification*

The Examiner objects to the specification on several grounds, relating to the use of reference numerals.

First, the Examiner states that reference number 27 is defined as "the forward edge of the most forward groove" at p. 4, line 1, and then reference number 39 is "referred to as the same" at p. 4, lines 27-28. Applicants respectfully note that different numbers are used because the element referred to with reference to Fig. 2 (the reference at p. 4, line 1) is a groove on the upper surface of the outsole, while the element referred to with reference to Fig. 3 (the reference at p. 4, lines 27-28) is a groove on the lower surface of the outsole.

Second, the Examiner notes that reference number 37 is used to refer both to the upper backfoot region and to additional grooves. This error has been corrected by changing the reference number for the additional grooves to 38. Fig. 3 has been corrected accordingly.

Applicant respectfully requests that these objections be withdrawn.

#### *Objections to the Drawings*

The Examiner has pointed out various errors in the informal drawings. Applicant has corrected these errors. A copy of Figs. 1-4, with corrections marked in red ink, is submitted

herewith for the Examiner's approval. A copy is being sent under separate cover to the Official Draftsman.

*Rejections Under 35 U.S.C. §112, Second Paragraph*

Claims 4, 6, 7, 47, 60, 66, 74 and 76 have been rejected as being indefinite.

With regard to claims 4, 6 and 7, in response to the Examiner's remarks Applicant has amended these claims by replacing "shoe outsole" with "outer member", language that is more consistent with Applicant's specification.

With regard to claims 47 and 76, Applicant has amended these claims to clarify the location of the intermediate member.

With regard to 60, 66 and 74, Applicant has amended these claims to clarify that it is the outer member that is being referred to.

With regard to claim 76, Applicant has amended this claim to clarify the relationship between the inner member and intermediate member.

It is believed that these amendments overcome the rejections under 35 U.S.C. §112, and Applicant respectfully requests that these rejections be withdrawn.

*Rejections Under 35 U.S.C. §102*

Claims 1 and 4-7 have been rejected as being anticipated by Tomat.

Applicant's claims, as amended, recite a shoe outsole for a baby shoe, i.e., a shoe outsole that is dimensioned for use in a baby shoe.

Tomat does not teach or suggest a baby shoe or an outsole for such a shoe. Instead, Tomat is directed solely to methods of manufacturing shoes. Moreover, as discussed in paragraph 11 of the Declaration of David Thorpe (submitted herewith), it is clear that the Tomat shoes are adult shoes because of the relatively thick, inflexible outsole and the required bulky insole 12, which would not be suitable for use in a baby shoe. As a result, Tomat does not anticipate Applicant's claims as amended.

Applicants respectfully request that this rejection be withdrawn.

*Rejections Under 35 U.S.C. §103*

The remaining claims have been rejected as unpatentable in view of Tomat (claim 76) or Tomat combined with Patterson (claims 2-3), Lennihan (claim 8), Turner (claims 47, 49-59, 61-65 and 67-73), or Turner further in view of Lennihan (claims 48, 60, 66, 74 and 75).

As noted above, Applicant's claims, as amended, recite a shoe outsole for a baby shoe. Applicant's amended claims further require that the softer durometer inner member be positioned and dimensioned to fit under a baby's heel during use of the baby shoe.

After studying the gait of babies who are learning to walk, in a study conducted by the assignee (Stride Rite) and Connecticut Children's Medical Center (CCMC), Applicant discovered that providing this inner member allows babies to comfortably roll from heel to toe in a correct walking gait. The relatively soft inner member also tends to reduce the wobbling that many babies exhibit when walking in conventional relatively stiff-soled baby shoes. The Stride Rite research and development project that utilized the gait information obtained from the CCMC gait study is discussed in the Declaration of David Thorpe, paragraphs 4-10.

The gait study confirmed that gaits of first walkers (babies learning to walk) are different from those of experienced, adult walkers, and raise different concerns. For example, walking barefoot was generally easier for first walkers than walking in the shoes that were tested. These shoes tended to cause the babies to wobble. The study also showed that a baby's foot naturally rolls from heel to toe in a proper gait, whereas the shoes that were tested introduced improper side-to-side motion. The gait study also determined the profile of pressure exerted on the sole of a baby's foot during walking, which allowed Stride Rite to identify areas of relatively higher pressure. (Declaration of David Thorpe, paragraph 5.)

Based on the information obtained from the gait study, Stride Rite decided on two key objectives for its work in developing a new baby shoe. Stride Rite wanted to develop a baby shoe that would (1) successfully mimic the barefoot walking characteristics of a first walker, and (2) aid the stability of the first walker, rather than destabilizing the baby's gait. The Stride Rite Natural Motion System products (baby shoes which embody the claimed invention) were developed to meet these objectives. (Declaration of David Thorpe, paragraph 6.)

These objectives are not fundamental in the design of adult footwear. The mimicking of barefoot walking is essential to a first walker -- the closer a shoe comes to achieving this goal, the easier the child will adapt to walking in footwear. Stability is also crucial, as a first walker



adapting to footwear still has to master the art of balance. In contrast, an adult walker is already adept at walking, and has adapted to wearing shoes and perfected his or her balance.

(Declaration of David Thorpe, paragraph 10.)

None of the cited references teaches or fairly suggests a shoe outsole for a baby shoe. Instead, each of the references is directed to a shoe designed for use by adults.

As discussed in the Declaration of Dr. Edward Mostone, submitted herewith, there are significant differences between infant feet and adult feet.

Infant feet are not simply smaller versions of adult feet. For instance, an infant's foot is hyper-mobile, and has little or no arch, due to "baby fat." Moreover, the bones of an infant are very soft. Some bones do not even appear on an x-ray of an infant's foot, because ossification has not yet occurred. As a result, the bone structure of an infant's foot is moldable until the child is at least 4-6 years old. These characteristics do not occur in most normal adult feet.

(Declaration of Dr. Edward Mostone, paragraph 2.)

The gait of an infant is also different from that of an adult. Infants tend to waddle, with their toes directed outward in a "duck walk." A normal, adult gait is generally not achieved until the child is 6 to 8 years old. Infants also have great difficulty balancing on two feet -- as a result many infants tend to walk with their arms raised, in an effort to balance. Improper footwear can exacerbate these problems. Most normal adults do not suffer from these problems. (Declaration of Dr. Edward Mostone, paragraph 3.)

As discussed in the Declaration of David Thorpe, each of the cited references describes a shoe that is designed for adult use and would not be suitable for a first walker. The Tomat shoe does not have the flexibility required for a baby shoe. Instead, the Tomat shoe has a relatively thick, inflexible outsole, and Tomat requires the use of a bulky insole 12 (see col. 2, line 61 and Fig. 7). The other shoes described in the references include studded soles, footbeds and thick rounded soles that would not be suitable for use in a baby shoe. (Declaration of David Thorpe, paragraph 11.)

Moreover, Turner shows a sole for footwear and, as a design patent, provides no description as to the type of shoe with which the sole would be used. Patterson describes a golf shoe and Lennihan describes a running shoe, shoe types that clearly are not intended for use by babies.

Thus, none of the cited references recognize the benefit of including, in a baby shoe, a relatively soft inner member positioned and dimensioned to fit under the baby's heel.

In view of the above, Applicant respectfully requests that the rejections under 35 U.S.C. §103 be withdrawn.

*Conclusion*

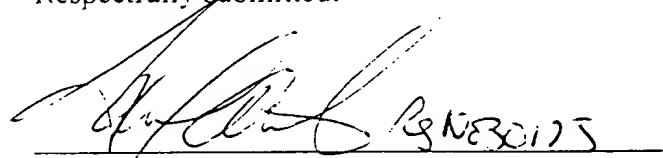
Attached is a marked-up version of the changes being made by the current amendment.

Applicant submit that this application is now in condition for allowance. Early favorable action is solicited. Submitted herewith is Petition for Automatic Extension, with a check for \$920.00 in payment of the extension fee. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted.

Date:

December 6, 2001



Celia H. Leber  
Reg. No. 33,524

Fish & Richardson P.C.  
601 Thirteenth Street, NW  
Washington, DC 20005  
Telephone: (202) 783-5070  
Facsimile: (202) 783-2331

Version with markings to show changes made

In the specification:

Paragraph beginning at page 5, line 3 has been amended as follows:

--Lower surface 22 includes a heel region 56 that defines additional grooves [37] 38.  
Grooves [37] 38 in heel region 56 extend completely to side edges 28, 30. Although six grooves [37] 38 are shown in heel region 56, there may be more or less grooves [37] 38, or no grooves [37] 38.--

In the claims:

Claims 1, 4, 6, 7, 47, 48, 60, 66, 74 and 76 have been amended as follows:

- 1. (Amended) A shoe outsole for a baby shoe, comprising:  
an outer member including an inner heel region; and  
an inner member located in the inner heel region and including a ground contacting surface, the inner member having a softer durometer than the outer member;  
the shoe outsole being dimensioned for use in a baby shoe, and the inner member being positioned and dimensioned to fit under a baby's heel during use of the baby shoe.--
- 4. (Amended) The shoe outsole of claim 1 wherein the inner member extends to within about 2 mm of a back edge of the [shoe outsole] outer member.--
- 6. (Amended) The shoe outsole of claim 5 wherein the intermediate member extends to within about 1.5 mm of a front edge of the [shoe outsole] outer member.--
- 7. (Amended) The shoe outsole of claim 5 wherein the intermediate member extends to within about 2 mm of a back edge of the [shoe outsole] outer member.--
- 47. (Amended) A shoe outsole for a baby shoe, comprising:  
an outer member [including an intermediate region and an inner heel region];  
an inner member, located in an inner heel region of the shoe outsole; and  
an intermediate member located in [the] an intermediate region of the shoe outsole,  
between the outer member and the inner member.

the intermediate member [and] having a softer durometer than the outer member, [the intermediate member] and including a plurality of ridges, and

[an] the inner member [located in the inner heel region and] including a ground contacting surface, [the inner member] and having a softer durometer than the outer member;

the shoe outsole being dimensioned for use in a baby shoe, and the inner member being positioned and dimensioned to fit under a baby's heel during use of the baby shoe.--

--48. (Amended) A shoe outsole for a baby shoe, comprising:

an outer member including [an inner heel region], a lower forefoot region, an opposite upper forefoot region, and a back wall, the back wall having a rounded contour extending smoothly between a horizontal plane and a vertical plane:

an inner member located in [the] an inner heel region of the shoe outsole, and including a ground contacting surface, the inner member having a softer durometer than the outer member;

a plurality of substantially parallel grooves defined in the lower forefoot region, [and] at least one of the plurality of grooves extending toward a front edge of the shoe outsole beyond a ground engaging portion of the lower forefoot region when flat footed:

[a plurality of substantially parallel grooves defined in the lower forefoot region;]

a plurality of substantially parallel ridges included in the lower forefoot region, at least some of the ridges being interdigitated with the grooves in the lower forefoot region; and

a plurality of substantially parallel grooves defined in the upper forefoot region;

the shoe outsole being dimensioned for use in a baby shoe, and the inner member being positioned and dimensioned to fit under a baby's heel during use of the baby shoe.--

--60. (Amended) The shoe outsole of claim 49 wherein the outer member includes a back wall having a rounded contour extending smoothly between a horizontal plane and a vertical plane.--

--66. (Amended) The shoe outsole of claim 61 wherein the outer member includes a back wall having a rounded contour extending smoothly between a horizontal plane and a vertical plane.--

--74. (Amended) The shoe outsole of claim 67 wherein the outer member includes a back wall having a rounded contour extending smoothly between a horizontal plane and a vertical plane.--

Applicant : Kevin H. Gillespie  
Serial No. : 09/458,415  
Filed : December 10, 1999  
Page : 11

Attorney's Docket No.: 06129-156001

--76. (Amended) The shoe outsole of claim 1 wherein the ground contacting surface further includes an intermediate member, between the inner member and the outer member, having a softer durometer than the outer member, the durometer of the inner member being softer than the durometer of the intermediate member.--

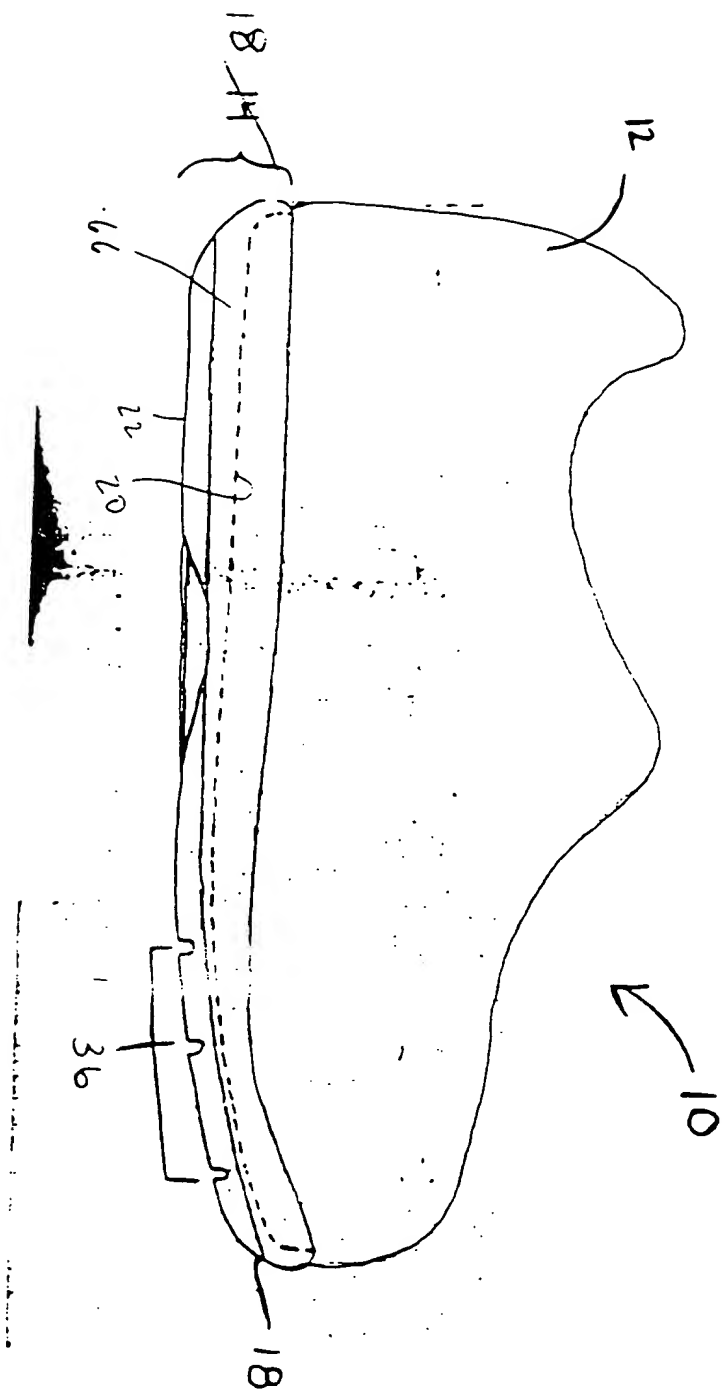


Fig. 1

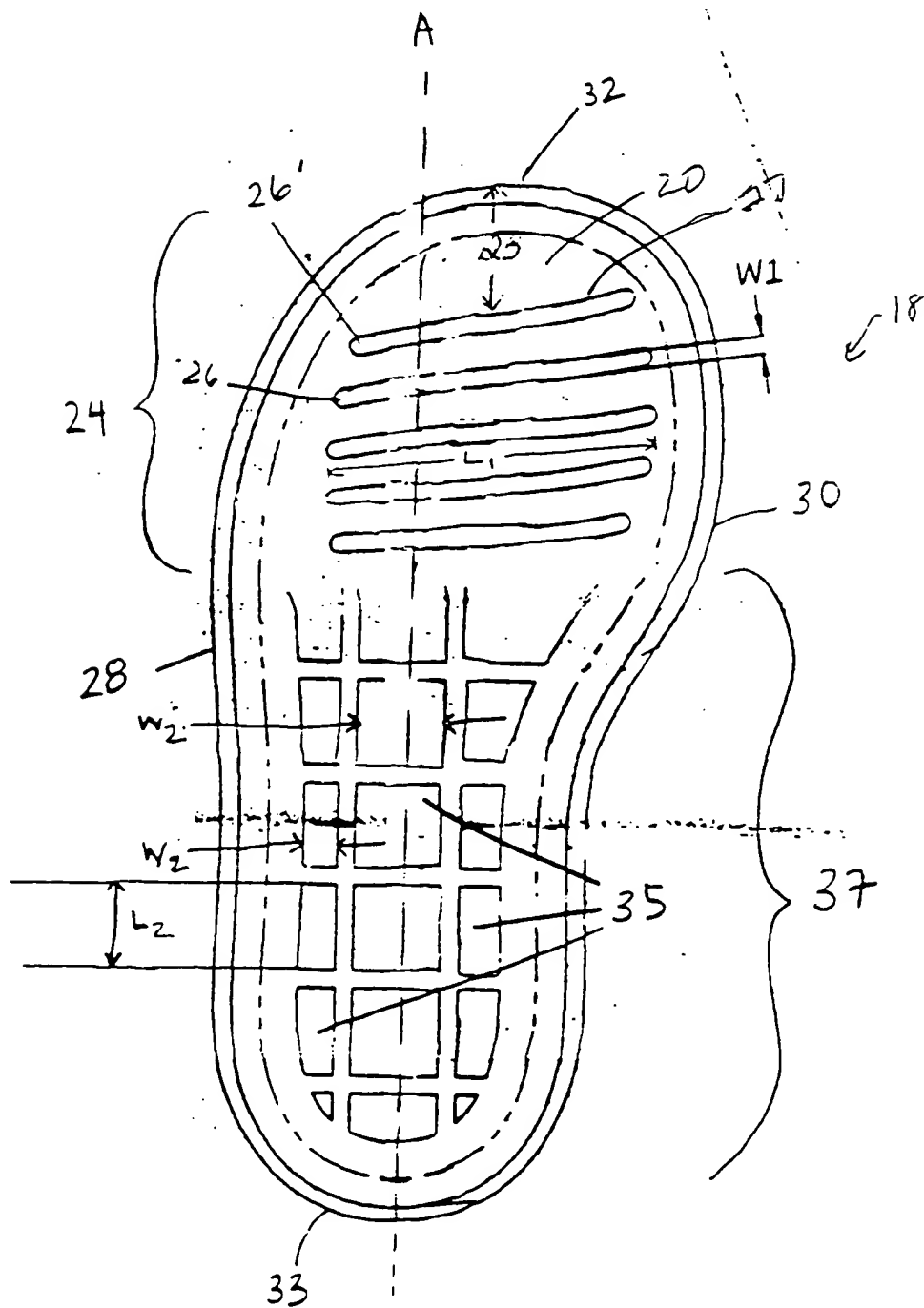


Fig. 2

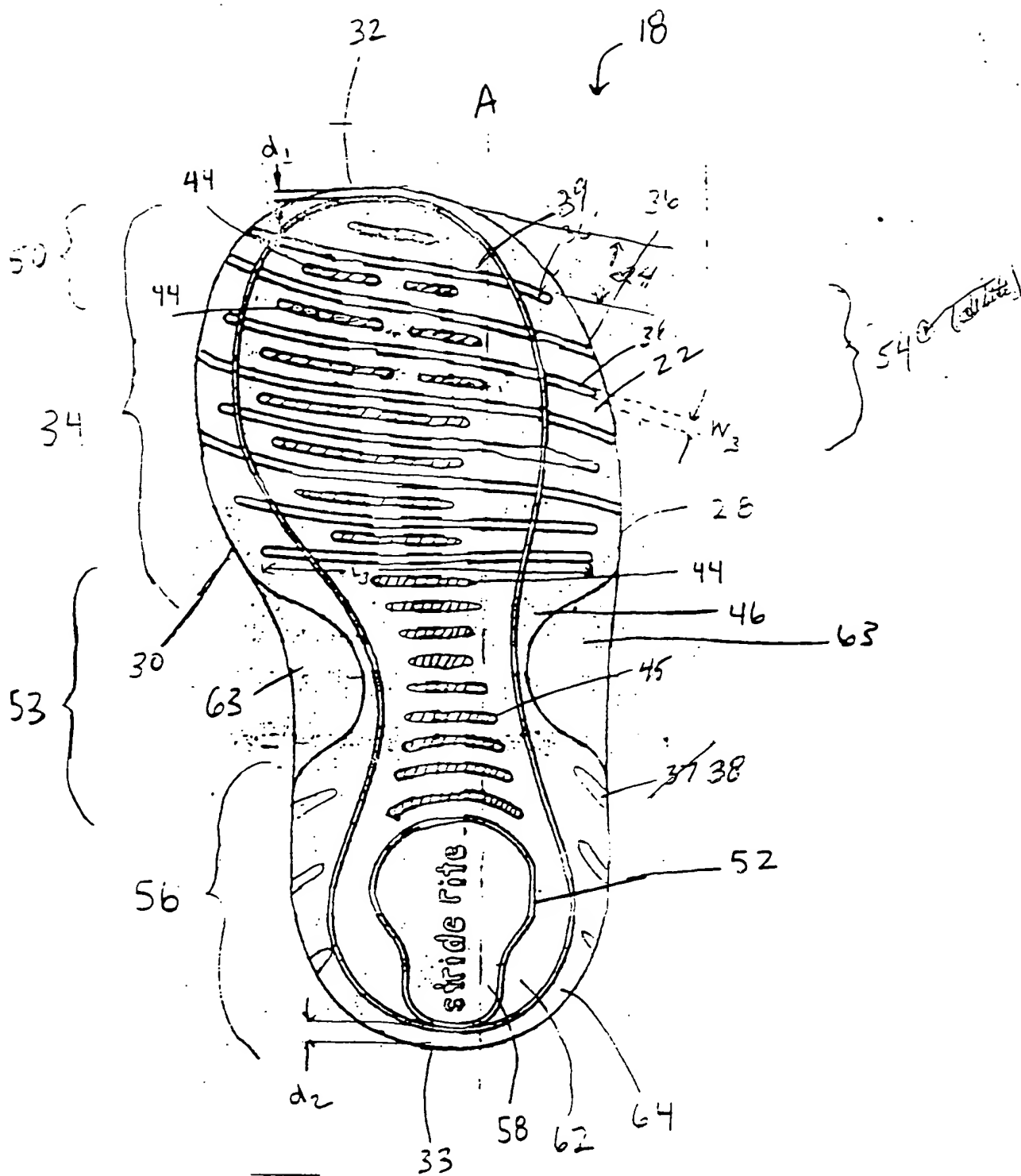
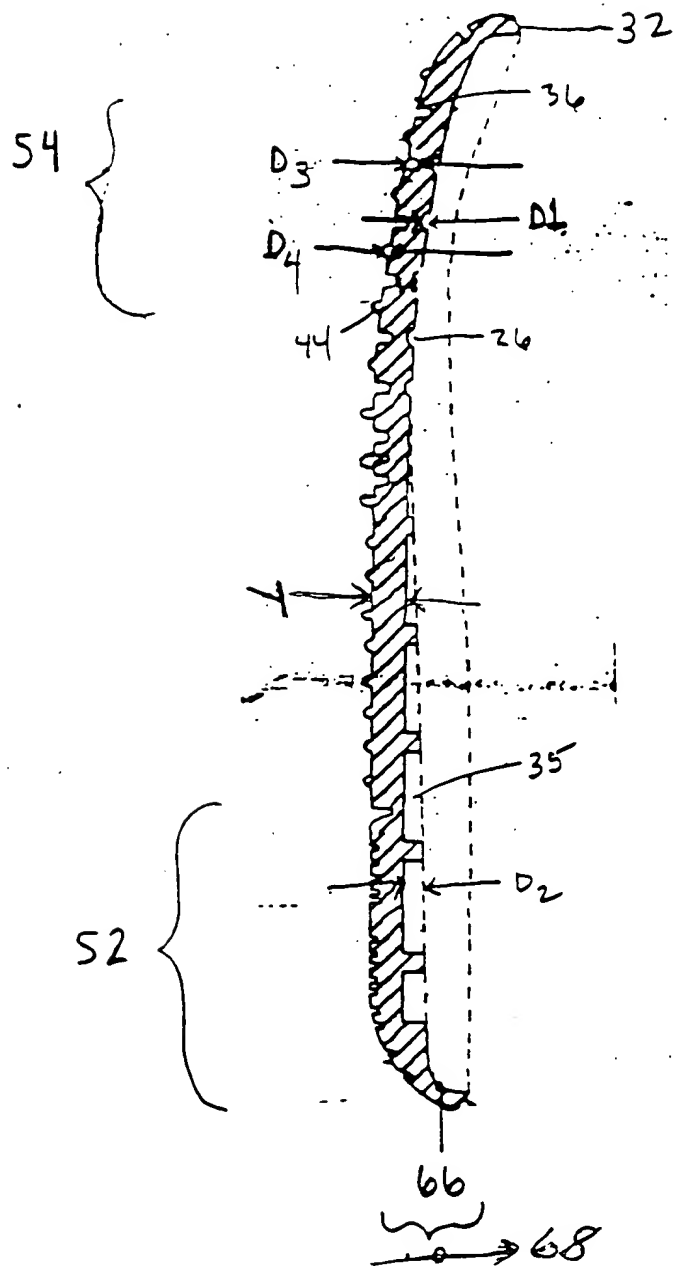


Fig. 3



Fig. 4



## COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled SHOE OUTSOLE, the specification of which:

☐ is attached hereto.

☒ was filed on December 10, 1999 as Application Serial No. 09/458,415 and was amended on

☐ was described and claimed in PCT International Application No. \_\_\_\_\_ filed on \_\_\_\_\_ and as amended under PCT Article 19 on \_\_\_\_\_.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose all information I know to be material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56.

I hereby appoint the following attorneys and/or agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Celia H. Leber, Reg. No. 33,524  
Timothy A. French, Reg. No. 30,175  
William E. Booth, Reg. No. 28,933

David L. Feigenbaum, Reg. No. 30,378  
John F. Hayden, Reg. No. 37,640  
Phyllis K. Kristal, Reg. No. 38,524

Address all telephone calls to CELIA H. LEBER at telephone number (617) 542-5070.

Address all correspondence to TIMOTHY A. FRENCH at:

FISH & RICHARDSON P.C.  
225 Franklin Street  
Boston, MA 02110-2804

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Full Name of Inventor: KEVIN H. GILLESPIE

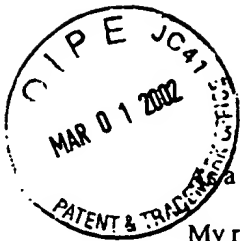
Inventor's Signature: \_\_\_\_\_

Date: 11/1/01

Residence Address: Jamaica Plain, MA

Citizenship: United States

Post Office Address: 18 Boylston Street  
Jamaica Plain, MA 02130



## COMBINED DECLARATION AND POWER OF ATTORNEY

I, a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled SHOE OUTSOLE, the specification of which:

- ☐ is attached hereto.  
☒ was filed on December 10, 1999 as Application Serial No. 09/458,415 and was amended on \_\_\_\_\_  
☐ was described and claimed in PCT International Application No. \_\_\_\_\_ filed on \_\_\_\_\_ and as amended under PCT Article 19 on \_\_\_\_\_.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose all information I know to be material to patentability in accordance with Title 37, Code of Federal Regulations, §1.56.

I hereby appoint the following attorneys and/or agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Celia H. Leber, Reg. No. 33,524  
Timothy A. French, Reg. No. 30,175  
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David L. Feigenbaum, Reg. No. 30,378  
John F. Hayden, Reg. No. 37,640  
Phyllis K. Kristal, Reg. No. 38,524

Address all telephone calls to CELIA H. LEBER at telephone number (617) 542-5070.

Address all correspondence to TIMOTHY A. FRENCH at:

FISH & RICHARDSON P.C.  
225 Franklin Street  
Boston, MA 02110-2804

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Full Name of Inventor: KEVIN H. GILLESPIE

Inventor's Signature: \_\_\_\_\_

Date: 11/01/01

Residence Address: \_\_\_\_\_

Jamaica Plain, MA

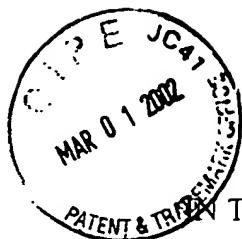
Citizenship: \_\_\_\_\_

United States

Post Office Address: \_\_\_\_\_

18 Boylston Street

Jamaica Plain, MA 02130



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Serial No. : 09/458,415  
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Title : SHOE OUTSOLE

Art Unit : 3728  
Examiner : A. Stashick

Commissioner for Patents  
Washington, D.C. 20231

DECLARATION OF DR. EDWARD MOSTONE

I, Dr. Edward Mostone, declare as follows:

1. I am a podiatrist. A copy of my curriculum vitae is attached.
2. There are significant differences between infant feet and adult feet. Infant feet are not simply smaller versions of adult feet. For instance, an infant's foot is hyper-mobile, and has little or no arch, due to "baby fat." Moreover, the bones of an infant are very soft. Some bones do not even appear on an x-ray of an infant's foot, because ossification has not yet occurred. As a result, the bone structure of an infant's foot is moldable until the child is at least 4 to 6 years old. These characteristics do not occur in most normal adult feet.
3. The gait of an infant is also different from that of an adult. Infants tend to waddle, with their toes directed outward in a "duck walk." A normal, adult gait is generally not achieved until the child is 6 to 8 years old. Infants also have great difficulty balancing on two feet -- as a result many infants tend to walk with their arms raised, in an effort to balance. Improper footwear can exacerbate these problems. Most normal adults do not suffer from these problems.

CERTIFICATE OF MAIL FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8, j that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

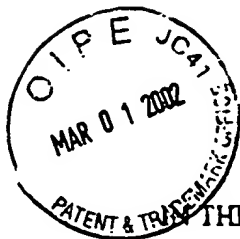
DECEMBER 6, 2001

Date of Deposit

Signature

TIMOTHY A. FRENCH

Typed or Printed Name of Person Signing Certificate



Attorney's Docket No.: 06179-116001

## THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Art Unit : 3728  
Examiner : A. Stashick

Commissioner for Patents  
Washington, D.C. 20231

DECLARATION OF DR. EDWARD MOSTONE

I, Dr. Edward Mostone, declare as follows:

1. I am a podiatrist. A copy of my curriculum vitae is attached
2. There are significant differences between infant feet and adult feet. Infant feet are not simply smaller versions of adult feet. For instance, an infant's foot is hyper-mobile, and has little or no arch, due to "baby fat." Moreover, the bones of an infant are very soft. Some bones do not even appear on an x-ray of an infant's foot, because ossification has not yet occurred. As a result, the bone structure of an infant's foot is moldable until the child is at least 4 to 6 years old. These characteristics do not occur in most normal adult feet.
3. The gait of an infant is also different from that of an adult. Infants tend to waddle, with their toes directed outward in a "duck walk." A normal, adult gait is generally not achieved until the child is 6 to 8 years old. Infants also have great difficulty balancing on two feet -- as a result many infants tend to walk with their arms raised, in an effort to balance. Improper footwear can exacerbate these problems. Most normal adults do not suffer from these problems.

## CERTIFICATE OF MAILING BY FIRST CLASS MAIL

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Signature

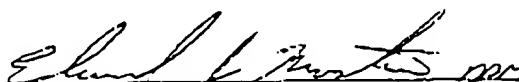
EDWARD J MOSTONE  
Typed or Printed Name of Person Signing Certificate

Applicant : Kevin H. Gillespie  
Serial No. : 09/458,415  
Filed : December 10, 1999  
Page : 2

Attorney's Docket No. 06129-156001

4 I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Date: 12-4-01

  
Dr. Edward Mostone

20152437.1



## Curriculum Vitae

May 3, 2001

NAME: Edward J. Mostone, D.P.M.  
ADDRESS: 678 Massachusetts Avenue, Cambridge, MA 02139  
PLACE OF BIRTH: Boston, MA

### EDUCATION:

1985 Doctor of Podiatric Medicine

New York College of Podiatric  
Medicine, New York, NY

1981 Bachelor of Arts

Assumption College, Worcester, MA

### POSTDOCTORAL TRAINING:

1986-1987 Chief Resident in Podiatric Medicine and Surgery Baptist Medical Center,  
Brooklyn, NY

1985-1986 Resident in Podiatric Medicine and Surgery Baptist Medical Center,  
New York, NY

### LICENSURE AND CERTIFICATION:

1986 Podiatry License Massachusetts

1986 Podiatry License Connecticut

1985 Podiatry License New York

1991 American Board of Podiatric Orthopaedics - Board Certified

1992 American Board of Podiatric Surgery - Board Certified

1998 American Academy of Pain Management

### PROFESSIONAL APPOINTMENTS:

#### Academic Appointments:

1997 Clinical Instructor in Orthopaedics, Tufts University School of Medicine

#### Hospital Appointments:

1987	Staff Member,	The Cambridge Hospital
1987	Staff Member,	Lawrence Memorial Hospital
1988	Staff Member,	Mount Auburn Hospital
1989	Associate Staff,	St. Vincent's Hospital
1993	Courtesy Staff,	Winchester Hospital
1996	Associate Staff	New England Medical Center
1996	Staff Member,	Marguerite D'Youville Hospital

#### Other Professional Positions, Major Visiting Appointments, Relevant Community Service:

1985	Clinical Instructor, Medical Mission, San Paolo, Brazil
1985-1987	Associate Director of Podiatric Services, New York State Police
1987-1990	Podiatrist, Park Street Homeless Shelter, Boston, MA
1988-1990	Team Podiatrist, Boston Public School System

- 1996 Visiting Physician, Medical Mission, Baltic American Clinic, Vilnius Emergency Hospital, Vilnius, Lithuania
- 1996 Visiting Lecturer, Staten Island University Hospital
- 1997 Weekly Instructor in Podiatry, Marguerite D'Youville Hospital School of Nursing
- 1999 Visiting Lecturer, Staten Island University Hospital

**AWARDS AND HONORS:**

- 1987 Baptist Medical Center, Scientific Publication Award, Keller-Austin Unionectomy.
- 1987 Dr. Frank Esposito Award, Excellence in Residents' Training
- 1996 Baltic American Clinic, Vilnius, Lithuania, Certificate of Appreciation
- 1994 Clinical Teacher of the Year, Podiatry Residency Program, The Cambridge Hospital

**PRINCIPAL CLINICAL AND HOSPITAL SERVICES RESPONSIBILITIES:**

- 1991-1998 Chief, Division of Podiatric Medicine, The Cambridge Hospital
- 1989-1998 Associate Director, Podiatric Surgical Residency Program, The Cambridge Hospital
- 1992-1996 Chairman, Podiatry Residence Selection Committee
- 1990-1992 Chief, Division of Podiatric Medicine, The Heritage Hospital
- 1996-present Director, Division of Podiatric Medicine, Marguerite D'Youville Hospital

**MAJOR COMMITTEE ASSIGNMENTS**

- 1990-1992 Medical Executive Committee, Heritage Hospital
- 1991-1999 Medical Executive Committee, The Cambridge Hospital
- 1991-1998 Patient Care Improvement Committee, The Cambridge Hospital
- 1991-1996 Ambulatory Quality Assurance Committee, The Cambridge Hospital
- 1992-1999 Credentials Committee, The Cambridge Hospital
- 1992-1998 Institution Coordination Committee, The Cambridge Hospital
- 1992-1998 Surgical Case Review Committee, The Cambridge Hospital
- 1992-1998 Board of Trustees, The Cambridge Hospital Podiatry Residency Program
- 1992-1996 Operating Room Committee, The Cambridge Hospital

**MAJOR ADMINISTRATIVE RESPONSIBILITIES:**

- 1989-1998 Associate Director, The Cambridge Hospital Podiatry Residency Program
- 1991-1992 Director, Podiatry Residency Training Program, The Cambridge Hospital
- 1991-1998 Chief, Division of Podiatry, The Cambridge Hospital
- 1987-present Clinical Instructor, Division of Podiatry, The Cambridge Hospital

**PROFESSIONAL SOCIETY INVOLVEMENTS:**

- 1987 Member, American Podiatric Medical Association
- 1987 Member, Massachusetts Podiatric Medical Society



Edward J. Mostone, D.P.M.

Curriculum Vitae

Page 3 of 7

May 3, 2001

- 1987 Member, American Diabetes Association
- 1987 Member, American Association of Hospital Podiatrists
- 1987 Member, American Society of Regional Anesthesia
- 1987 Member, American Podiatric Circulatory Society
- 1991 Member, American College of Foot Surgeons
- 1992 Member, American College of Foot and Ankle Surgeons
- 1998 Member, American Public Health Association
- 1998 Member, American Academy of Pain Management
- 1998 Member, American Academy of Foot Orthopaedists

#### EDITORIAL BOARDS:

#### Self Report of Research, Teaching, Clinical Scholarship.

- 1985 Lecture Series, The Common Podiatric Problems for the General Practitioner, Medical Mission, San Paolo, Brazil
- 1985 Lecture Series, The Diabetic Foot and its Care, Medical Mission, San Paolo, Brazil
- 1985 Lecture, Prevention and Care of Foot Ulcers, Red Cross Nursing Staff, Medical Mission, San Paolo, Brazil
- 1985 Lecture, Assessment and risk factors for amputation in patients with diabetes mellitus, Medical Mission, San Paolo, Brazil
- 1988 The New Podiatric Physician, St. Vincent's Hospital Department of Medicine
- 1988 Lecture Series, Reverdin-Laird Bunionectomy, The Cambridge Hospital, Division of Podiatric Medicine
- 1989 Lecture Series, The Diabetic Foot, St. Vincent's Hospital Department of Podiatry.
- 1990 Lecture Series, The Surgical Approach to Hammertoe Deformity, The Cambridge Hospital, Division of Podiatric Medicine
- 1991 Lecture Series, Management of Fractures of the Forefoot, The Cambridge Hospital, Division of Podiatric Medicine
- 1991 Lecture Series, Reverdin-Laird Bunionectomy, St. Vincent's Hospital Department of Podiatry
- 1991 Lecture Series, Common Foot Problems in the Elderly, St. Vincent's Hospital Department of Podiatry
- 1987-1998 Facilitator, Resident's Journal Club, Department of Podiatric Medicine, The Cambridge Hospital
- 1992 Lecture Series, Treatment of Infections of the Lower Extremity, The Cambridge Hospital, Department of Medicine, Residency Teaching Program
- 1992 Lecture Series, Care of Bunions, Corns, Calluses and Ulcerations of the Feet, Primary Care Physicians, Fallon Clinic.
- 1992 Certifying Course Instructor, Lecturer, and Cadaver Laboratory Instructor, Ankle Arthroscope and Endoscopic Plantar Fasciotomy, Boston University School of Medicine and The Cambridge Hospital, Division of Podiatry.
- 1992 Lecture Series, Common Podiatric Problems Treated at The Cambridge Hospital Emergency Department, The Cambridge Hospital

- 1994 Lecturer and Instructor, The History of Podiatry and Current Mandates of Residency Training Programs, Department of Internal Medicine, Fallon Medical Center
- 1994 Lecturer and Instructor, Certifying Program for Laser Surgery, The Cambridge Hospital, Division of Podiatric Medicine
- 1994 Lecturer, Podiatry Surgical Review Course, The Cambridge Hospital, Division of Podiatric Medicine
- 1994 Lecture Series, The Treatment of the Diabetic Foot, The Cambridge Hospital, Department of Medicine.
- 1995 Instructor, Common Foot Problems in the Elderly, Community Family Nursing Service, Everett/Medford, MA
- 1995 Instructor, Classification and treatment care plan for foot ulcers, Community Family Nursing Service, Everett/Medford, MA
- 1996 Grand Rounds, Surgical Approach to Hammertoe Deformity, Baltic American Clinic, Vilnius, Lithuania.
- 1996 Grand Rounds, Management of Open/Closed Fractures of the Foot, Vilnius University Emergency Hospital, Vilnius, Lithuania
- 1996 Grand Rounds, Fundamentals of Foot Surgery, Baltic American Clinic, Vilnius, Lithuania
- 1996 Grand Rounds, The Diabetic Foot: diagnosis, care and follow-up. Baltic American Clinic, Vilnius, Lithuania
- 1996 Lecture Series, Common Podiatric Problems Treated in the Emergency Room, Vilnius University Emergency Hospital, Vilnius, Lithuania
- 1996 Lecture Series, Puncture wounds: normal laboratory values vs. severe infection and antibiotic treatment. Vilnius University Emergency Hospital, Vilnius, Lithuania
- 1996 Grand Rounds, Peripheral vascular disease in the diabetic foot. Baltic American Clinic, Vilnius, Lithuania.
- 1996 Lecture Series, Classification and treatment care plan for foot ulcers, Division of Podiatry, Staten Island University Hospital
- 1996 Lecture Series, Medical and Surgical Management of Charcot's Arthropathy in patients with diabetes. Vilnius University Emergency Hospital, Vilnius, Lithuania.
- 1998 Soft Tissue Infection in the Diabetic Foot, Division of Podiatry, Staten Island University Hospital
- 1999 Lecture Series, Circulatory Problems in the Lower Extremity of the Diabetic, Division of Podiatry, Staten Island University Hospital.
- 1999 Lecture Series, Circulatory Problems in the Lower Extremity of the Diabetic, Physician Assistants, New England Medical Center.
- 1999 Footwear for the Diabetic, Cambridge Elder Services, City of Cambridge
- 1999 to present Resident's Journal Club, Division of Podiatric Medicine, The Cambridge Hospital

#### PUBLICATIONS AND TEXTS:

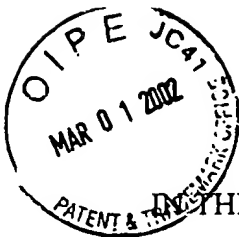
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5. Miller J, Nath R, Stoughton A, Carpenter B, Mostone E. Streptococcal Toxic Shock Syndrome from a Puncture Wound to the Foot. J Foot Ankl Sur, vol 35, no.6, p578, Nov/Dec 1996.
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7. Killian F, Carpenter B, Mostone E. Dorsal Dislocation of the First Metatarsophalangeal Joint. J Foot Surg, vol 35, no. 2, p131, Mar/Apr 1997.
8. Author, "Achilles Tendonitis" Fallon Quarterly Community Health Guide, Fall 2000

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7. Wylie-Rosset J, Walker EA, Shamoon H, Engel S, Basch C, Zybert P. Assessment of documented foot examinations for patients with diabetes in inner-city primary care clinics. *Arch Fam Med* 1995;4:46-50.
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21. Armstrong DG, Todd WF, Lavery LA, Harkless LB, Bushanan TR. The natural history of acute Charcot's arthropathy in a diabetic foot specialty clinic. Diabet Med 1997;14:357-63.
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33. Yale, I. Arthritic foot and related connective tissue disorders., out of print. Lippincott Williams and Wilkins 1984.
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37. Boulton. AJ et al. The foot in diabetes. 1st edition, Wiley, John & Sons Inc 2000.
38. Subtonick, SL. Sports medicine of the lower extremity. 2nd edition, WB Saunders 1999.



THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Kevin H. Gillespie  
Serial No. : 09/458,415  
Filed : December 10, 1999  
Title : SHOE OUTSOLE

Art Unit : 3728  
Examiner : A. Stashick

Commissioner for Patents  
Washington, D.C. 20231

DECLARATION OF DAVID THORPE

I, David Thorpe, declare as follows:

1. I am Director of Engineering for The Stride Rite Children's Group, Inc. ("Stride Rite"). I have worked in shoe development, at Stride Rite and previously at C. & J. Clark International, since 1983. I have extensive experience in research and development pertaining to shoes for both children and adults.

2. I am familiar with the above patent application, and with the commercial products that embody the claimed invention, referred to as "The Stride Rite Natural Motion System products." I have worked closely with the inventor, Kevin Gillespie, in the development of these products.

3. There are fundamental differences between adult feet and baby feet. Naturally, these differences translate into differences in footwear suitable for use by adults and by babies. Well-designed and engineered baby shoes incorporate many features and benefits not used in adult footwear and vice versa.

4. The Stride Rite Natural Motion System products are the result of several

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Date of Deposit

Signature

TIMOTHY A. FRENCH

Typed or Printed Name of Person Signing Certificate

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Kevin H. Gillespie  
Serial No. : 09/458,415  
Filed : December 10, 1999  
Title : SHOE OUTSOLE

Art Unit : 3728  
Examiner : A. Stashick

Commissioner for Patents  
Washington, D.C. 20231

DECLARATION OF DAVID THORPE

I, David Thorpe, declare as follows:

1. I am Director of Engineering for The Stride Rite Children's Group, Inc. ("Stride Rite"). I have worked in shoe development, at Stride Rite and previously at C. & J. Clark International, since 1983. I have extensive experience in research and development pertaining to shoes for both children and adults.

2. I am familiar with the above patent application, and with the commercial products that embody the claimed invention, referred to as "The Stride Rite Natural Motion System products." I have worked closely with the inventor, Kevin Gillespie, in the development of these products.

3. There are fundamental differences between adult feet and baby feet. Naturally, these differences translate into differences in footwear suitable for use by adults and by babies. Well-designed and engineered baby shoes incorporate many features and benefits not used in adult footwear and vice versa.

4. The Stride Rite Natural Motion System products are the result of several

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Date of Deposit

Signature

<<Name>>

Typed or Printed Name of Person Signing Certificate

Applicant : Kevin H. Gillespie  
Serial No. : 09/458,415  
Filed : December 10, 1999  
Page : 2

Attorney's Docket No.: 06129-156001

months of focused research, utilizing information obtained from a gait study that was performed at the Connecticut Children's Medical Center. The gait study looked at the gaits of a number of babies who were taking their first steps ("first walkers"), and identified key characteristics of the babies' gaits.

5. The gait study confirmed that gaits of first walkers are different from those of experienced, adult walkers, and raise different concerns. For example, we learned that walking barefoot was generally easier for first walkers than walking in the shoes that were tested. These shoes tended to cause the babies to wobble. We also found that a baby's foot naturally rolls from heel to toe in a proper gait, whereas the shoes that were tested introduced improper side-to-side motion. The gait study also determined the profile of pressure exerted on the sole of a baby's foot during walking, which allowed us to identify areas of relatively higher pressure.

6. Based on the information obtained from the gait study, we decided on two key objectives for our work in developing a new baby shoe. We wanted to develop a baby shoe that would (1) successfully mimic the barefoot walking characteristics of a first walker, and (2) aid the stability of the first walker, rather than destabilizing the baby's gait.

7. In considering the results of the gait study, we concluded that the wobbling and improper side-to-side motion introduced by the shoes that were tested occurred because the shoes were too stiff, had too many abrupt edges, and did not provide a good landing area at the heel.

8. In our new "Stride Rite Natural Motion System" shoe design, we created a shoe that would mimic the barefoot gait of a first walker by maximizing the shoe flexibility. Flexibility was maximized by providing: (a) a uniformly flexible outsole, with deep flex grooves to the end of the forefoot; (b) a Strobel construction with no insole; and (c) strategic positioning of upper seams to avoid flex areas. Barefoot walking was further simulated by providing a thin outsole to avoid extra weight that could inhibit natural gait; a flat pitch of the outsole from toe to heel, simulating the profile of a first walker's foot, and consistent substance padding under the foot.



Applicant : Kevin H. Gillespie  
Serial No. : 09/458,415  
Filed : December 10, 1999  
Page : 3

Attorney's Docket No.: 06129-156001

9. We enhanced the lateral-to-medial stability of a first walker's gait by providing a multi-durometer outsole. The outsole includes a soft durometer "landing pad" (inner member) under the baby's heel, and a soft "center stride path" (intermediate member). These relatively softer areas of the outsole provide resilient cushioning in regions of the baby's sole that experience high pressure during walking. We also provided (a) large radius areas at the heel and toe, giving a stable beginning to the gait and a bigger landing area for first walkers, many of whom land on an angle rather than straight on, and (b) a back wall having a rounded contour extending smoothly between a horizontal plane and a vertical plane to avoid abrupt edges that could destabilize the baby's gait. In addition, we provided a flat waist arch inside the shoe, because first walkers have not yet developed an arch and thus adding an arch shape into the shoe may unbalance the baby.

10. I do not consider the objectives discussed above as being fundamental in the design of adult footwear. The mimicking of barefoot walking is essential to a first walker. The closer we get to achieving this goal, the easier the child will adapt to walking in footwear. Stability is also crucial, as a first walker adapting to footwear still has to master the art of balance. In contrast, an adult walker is already adept at walking, and has adapted to wearing shoes and perfected his or her balance.

11. I have reviewed the prior art references cited by the examiner in the above patent application. Each of these references describes a shoe that is designed for adult use and would not be suitable for a first walker. The Tomat shoe does not have the flexibility required for a baby shoe. Instead, the Tomat shoe has a relatively thick, inflexible outsole, and Tomat requires the use of a bulky insole 12 (see col. 2, line 61 and Fig. 7). The other shoes described in the references include studded soles, footbeds and thick rounded soles that would not be suitable for use in a baby shoe.

Applicant : Kevin H. Gillespie  
Serial No. : 09/458,415  
Filed : December 10, 1999  
Page : 4

Attorney's Docket No.: 06129-156001

12. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are

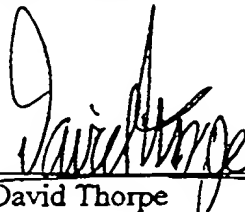
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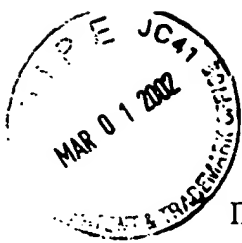
punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Date:

December 9th 2001

  
\_\_\_\_\_  
David Thorpe

20352437



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Kevin H. Gillespie  
Serial No. : 09/458,415  
Filed : December 10, 1999  
Title : SHOE OUTSOLE

Art Unit : 3782  
Examiner : A. Stashick

**Attention: Official Draftsman**  
Commissioner for Patents  
Washington, D.C. 20231

TRANSMITTAL OF AMENDED DRAWINGS

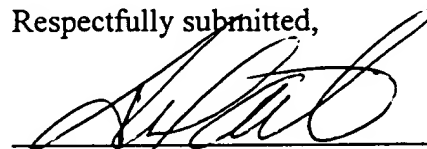
Enclosed are four (4) sheets of amended drawings for the application with changes indicated in red.

FIGS. 1-4 are amended in a manner to address various errors noted by the Examiner. FIG. 3 is also amended to correct use of reference number 37 to refer both to the upper backfoot region and to additional grooves.

Applicant submits that no new matter is introduced and requests approval of the amended drawings.

Respectfully submitted,

Date: December 6, 2001

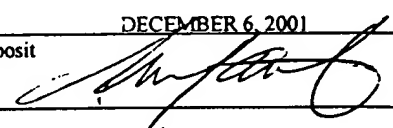
  
Timothy A. French  
Reg. No. 30,175

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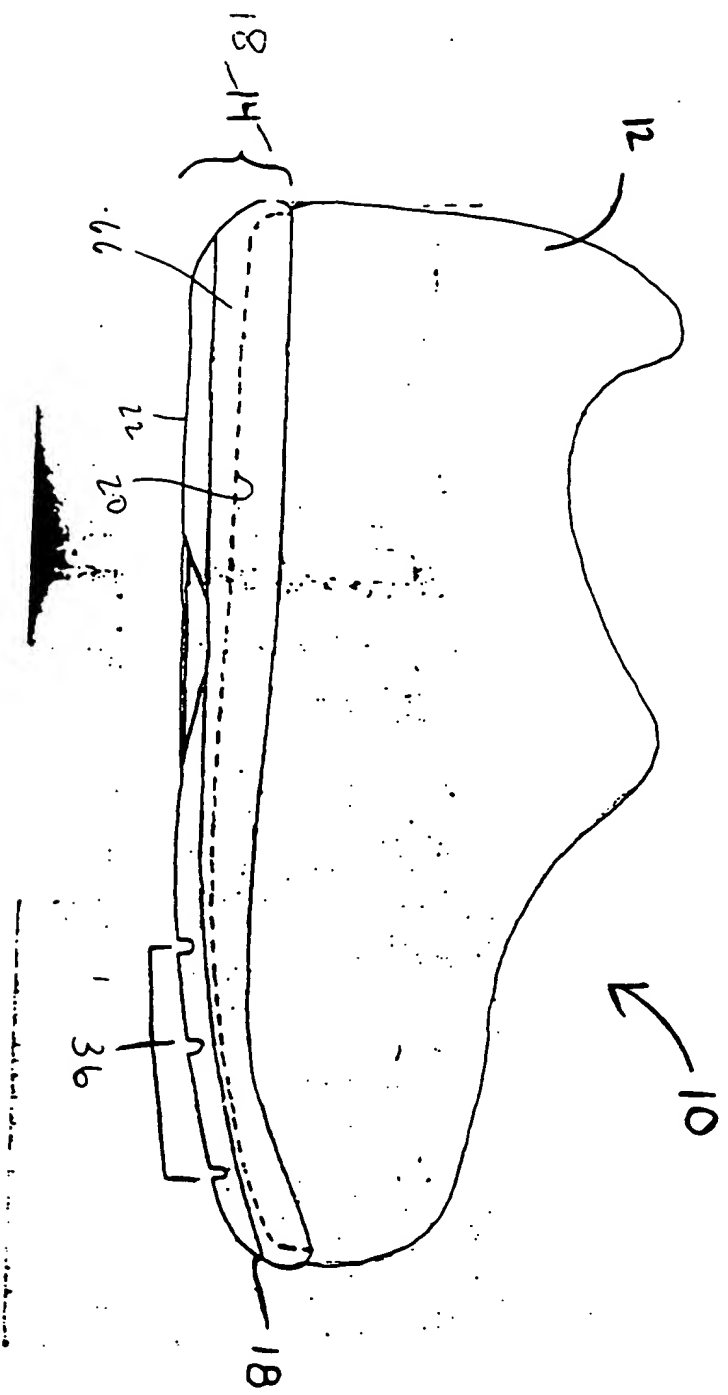


Fig. 1

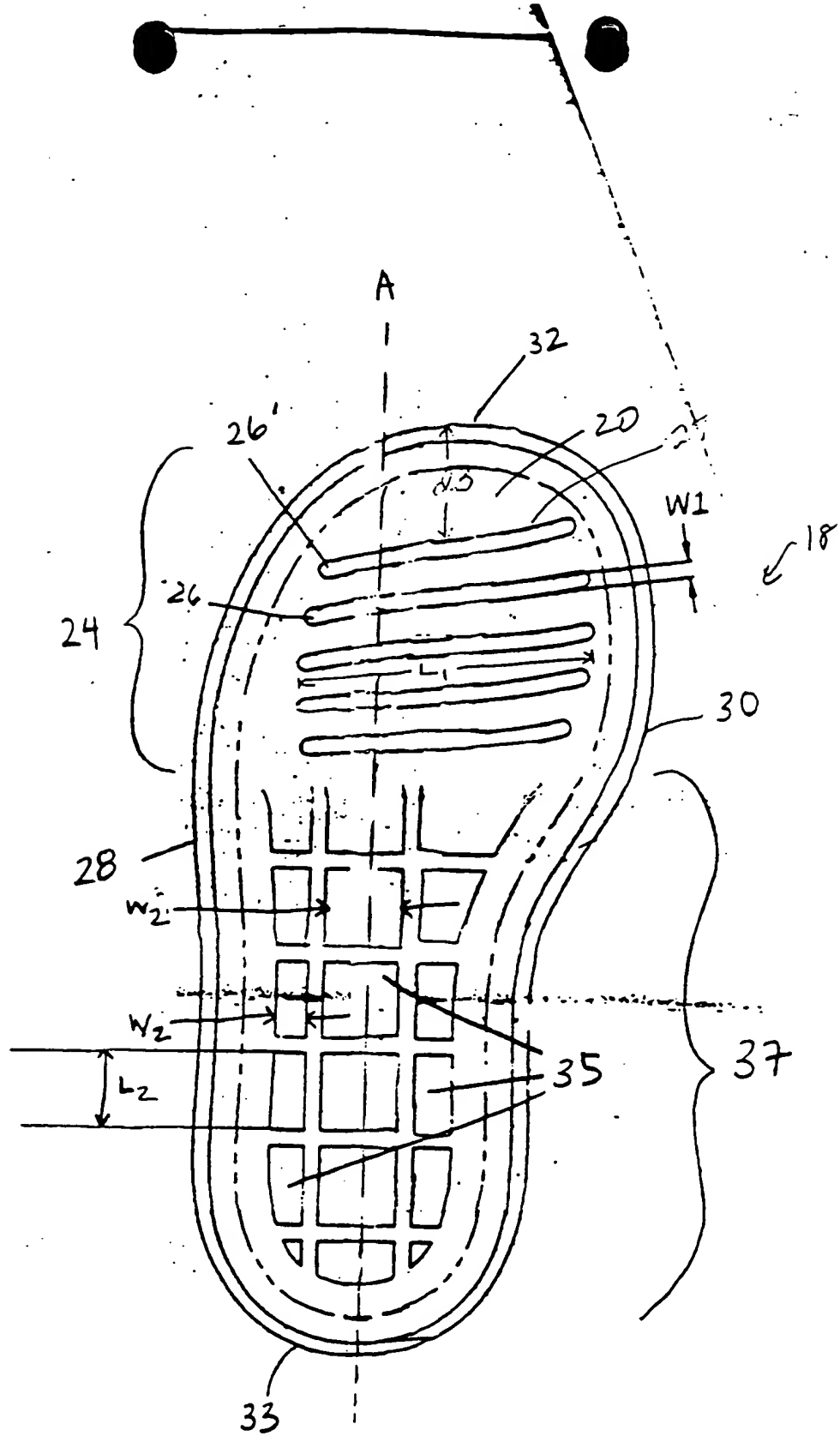


Fig. 2

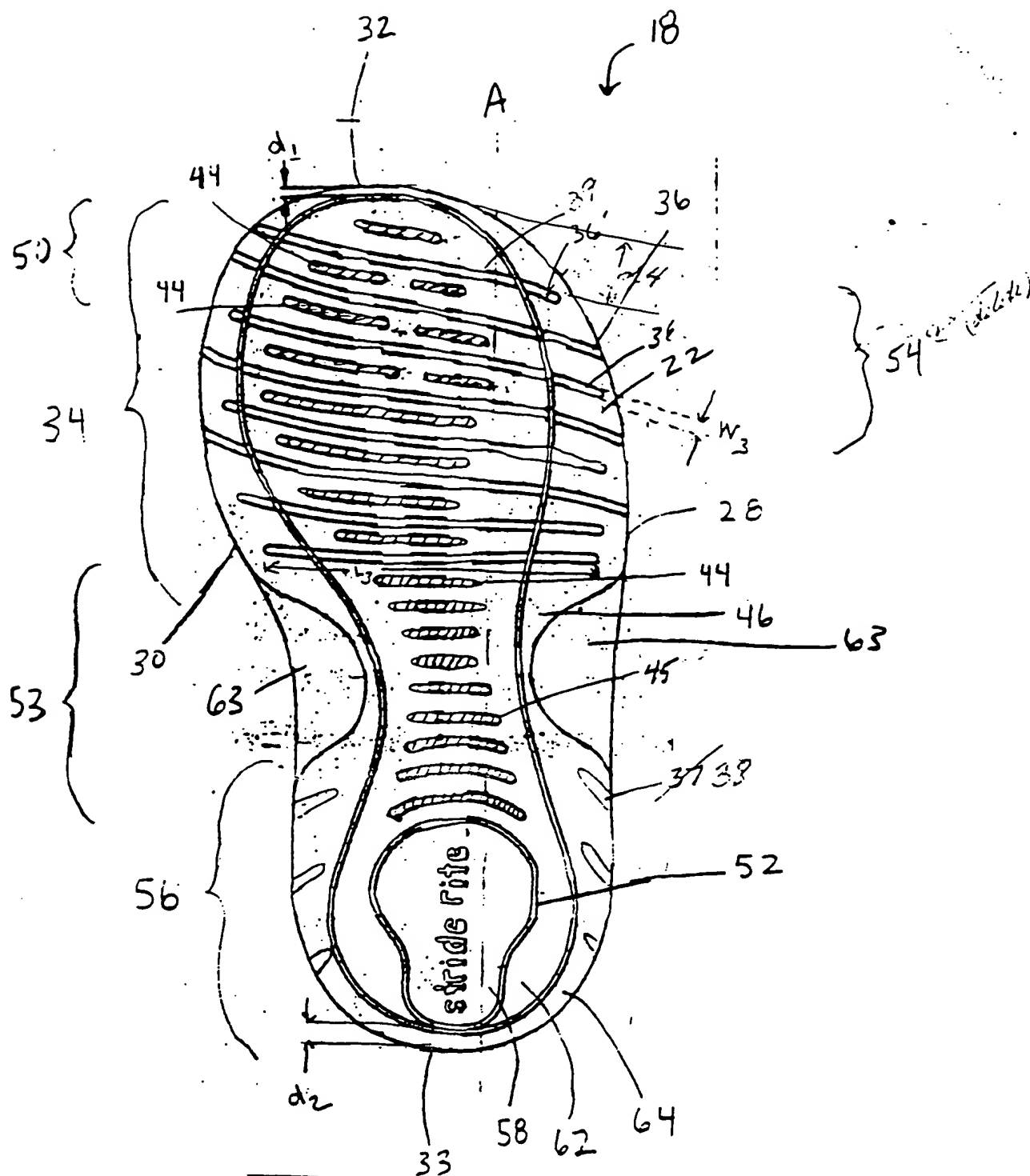
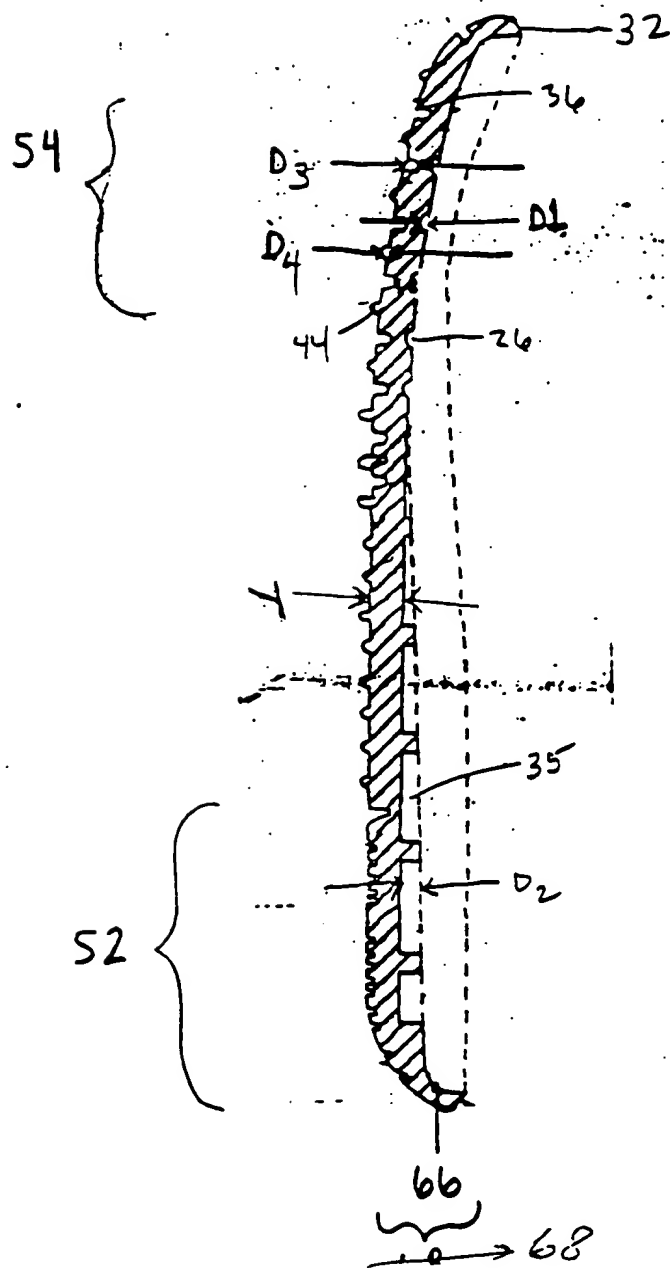
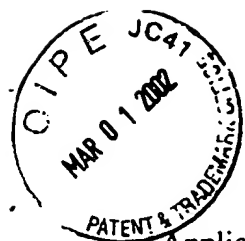


Fig. 3

Fig. 4







## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Kevin H. Gillespie  
Serial No. : 09/458,415  
Filed : December 10, 1999  
Title : SHOE OUTSOLE

Art Unit : 3728  
Examiner : A. Stashick

Commissioner for Patents  
Washington, D.C. 20231

TRANSMITTAL LETTER AND PETITION FOR AUTOMATIC EXTENSION

Correspondence relating to this application is enclosed. The required fees are computed below. Please apply any charges not covered, or any credits, to Deposit Account No. 06-1050.

Total Claims	38	-	38	=	0	\$0
Independent	3	-	3	=	0	\$0
First Presentation of Multiple Dependent Claims						\$0

Applicant hereby petitions under 37 C.F.R. §1.136 for a 3 month extension of time.

\$920

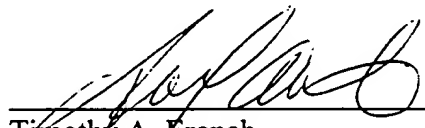
TOTAL FEE DUE

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A check for \$920 is attached.

Respectfully submitted,

Date: December 6, 2001

  
\_\_\_\_\_  
Timothy A. French  
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Applicant or Patentee Kevin H. Gillespie09/458,415

No. (Application, Appeal, Interference, Patent, Reexam)

December 10, 1999

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Title: SHOE OUTSOLE

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☐ Small Entity Statement  
☒ Other Declaration of Dr. Edward Mostone (10 pp); Declaration of David Thorpe (6 pp); Transmittal of Amended Drawings

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